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JOHN B. WATSON, New York (*J. of Exp. Psych.*)
JAMES R. ANGELL, 522 Fifth Avenue, New York (*Monographs*) and
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THE

PSYCHOLOGICAL BULLETIN

THE PSYCHOLOGY, BIOLOGY AND PEDAGOGY OF GENIUS

BY LEWIS M. TERMAN AND JESSIE M. CHASE

Leland Stanford Jr. University

(SUMMARY OF LITERATURE SINCE 1914)

Psychological and Literary Interpretations of Genius.—Meumann's work (**46**) is too well known to warrant extensive comment here. Volume II presents an extensive summary of the experimental data on the higher thought processes. Genius is only incidentally touched upon, but the author's definition of higher intelligence as the ability to deal with concepts and to think in terms of symbols is pertinent. Volume III contains many valuable observations relating to the analysis of the abilities involved in the mastery of the various types of school subject matter. Kiernan (**39**), after a description of the ability of various men of genius, arrives at the conclusion that genius is not a sport nor a neurosis, but a child potentiality developed through the transformation of attention into a fixed idea dominating the life work. Epilepsy in particular he shows to have no relation to genius. Garnett (**22**) attempts to prove statistically the existence of independent factors (*e.g.*, "cleverness") which, in addition to Spearman's general factor, enter into divers mental tests. The author offers the following mathematical formula for genius: $\epsilon = \sqrt{g^2 + c^2}$, where g = general ability, or capacity to concentrate attention, and c = "cleverness," or the tendency to associate by similarity! Knowlson's book (**40**) is addressed to "general readers of the more thoughtful type." It is intended "to show the importance of a study of creative thought" and "to institute a regime for the individual whereby he may secure the highest mental efficiency." It stresses the subconscious factor in creative thinking. The author is always entertaining, but as

he depends chiefly upon quoted authority and clever speculation there is little in his volume of interest to the scientific student. Poincaré has given us (55) an extremely interesting account of his own methods of work and of the circumstances leading up to his mathematical discoveries. The passage indicated constitutes an invaluable document of a kind all too rare. The author tells us that his discoveries nearly all came by intuition. Ordinarily there was first a period of unsuccessful application to a problem, then a longer or shorter period of diversion to other interests, and finally a spontaneous flashing up of the solution. The author attributes the final result to the activity of a subconscious ego and believes that this activity is guided by an aesthetic sensibility which is fundamental to creative thinking. Sturt (77) devotes a chapter of his semi-philosophical volume to a speculative treatment of the psychology of invention. He emphasizes the part played by subconscious factors and opposes the mechanistic and neural explanations of creative thinking. An anonymous article (1) holds that greatness depends, 1st, on the flash of original idea: 2d, on appreciation of its value to the world: 3d, on determination to succeed: 4th, on opportunity. Surely no one would dispute these theses. In an introduction by Jack London the book by Schwarz (67), is characterized as an "immortal and epoch-making" work. The reviewers are more inclined to agree with Max Nordau who also furnishes an introductory letter in which he frankly says: "your book is teeming with ideas, but still more with feeling. It is a vehement preaching . . . a pretext for invective against the average man . . . it is dogmatic, not scientific . . . ." The tenor of the book suggests a literary and perhaps gifted mind working *in vacuo*. In two volumes Hall (31) has given us an epoch-making study, chiefly from the psychological point of view, of the greatest moral genius of all time. It is impossible even to characterize such a monumental work in the few lines here available, much less to summarize it. Delage (17), criticizes Ostwald's study of the lives of great men as unscientific, insincere and designed to exploit German Kultur. Surely not all will agree with Ostwald's view that the chief function of woman is merely to smoothe the pathway for her genius husband. Wilson's novel, "Martin Schüler" (91), is highly praised by the Dial and the New Statesman as a literary picture of genius. The reviewers have not seen it.

Statistical, Biological, and Genetic Studies of Genius.—In his

valuable summaries of data on 1000 American men of science Cattell (10) deals chiefly with eugenic, economic, and environmental factors. Statistics too extensive to summarize here are given on nationality, social class, education, marriage, and size of family. The author is inclined to stress the importance of environmental factors. The "order of merit method" used in the selection of these 1000 men has many possibilities of application in psychological research. Pearce (54) presents statistics as to parentage, education, and interests of the medical group in Cattell's 1000 American men of science. No conclusions are drawn. Clarke's study of 1000 men of letters (12) is stimulated by Ward's "Applied Sociology." He fails to verify Ward's conclusions as to the preponderating influence of nurture and the uniform distribution of genius. He presents interesting data in regard to environment, economic situation, family, geographical distribution, and the like. Some of his conclusions are decidedly questionable; *e.g.*, that there is slight relation between intelligence and acquisition of a high-school education, and that the different nationalities are equally productive of genius. Nearing (50) concludes from his study of the distribution of men included in Who's Who in America that the concentration of genius in the New England states indicates a superiority of stock in this region. The second article (51) points out the concentration of ability in cities and in certain universities. Woods (95) has made a valuable study of the racial origin of successful Americans, showing the importance of racial stock in the production of genius. Davenport and Scudder (16) have investigated the heredity and the juvenile traits of great naval officers. Nomadism, extreme venturesomeness or thalassophilia (sea lust), characterized the youth of nearly all. Sea lust is "a definite instinct," especially marked in certain races. "That sea lust is a racial trait is recognized by seamen themselves"! Thalassophilia "acts like a recessive." The authors believe their findings could be advantageously used in the selection of naval officers. Davenport (15) also gives a valuable account of the late Professor C. O. Whitman's heredity and early interests and of the environmental influences which molded his development. Walcott's statistical study (87) of men taking the Ph.D. degree in certain institutions between 1885 and 1904 shows that they obtain this degree on an average a little less than six years after graduation, that the death rate of the Ph.D. group is lower than for college graduates as a whole, that their proportion to A.B. men is about 1 in 22, and that approximately

one third are included in "Who's Who," one third in American Men of Science, and 10 per cent. in Cattell's 100 men of science. Ellis (19) reiterates his earlier views to the effect that genius is related to certain traits of abnormality and that women display genius less often than men because they are less variable. The author evidently remains unconvinced by the data of Pearson and L. S. Hollingworth. Armstrong (4) argues, without data, for the close relation between genius and insanity, citing selected cases to prove his theory. Redfield (59) maintains that rapid breeding inevitably leads to the production of inferior stock, slow breeding to the production of superior stock. Inferior stock can be transformed into superior stock in 100 years, and into eminent men in 200 years! The author cites 571 specially selected pedigrees to prove his theory. In another article which one is surprised to find in a reputable scientific journal (58) the author argues that improvement comes chiefly through the inheritance of acquired traits. Millard (47) gives brief descriptions of a number of eminent men who displayed precocity and speculates as to the influence of advanced age of parents. Gemmill (24) points out that since many geniuses have come from defective strains, we should use caution in the social condemnation or sterilization of the so-called "unfit." Escott (20) in a discursive article cites examples of the inheritance of genius.

Social Aspects of Genius.—More studies are needed of the type furnished by Tanner (78) on the social aspects of genius. The inventions of Arkwright, Cartright, Hargreaves, Whitney, Howe, and Watt are studied from this point of view and the dependence of inventive progress upon economic conditions is convincingly shown. Suggestions are made bearing on the psychological nature of the typical inventive processes. Adler's theory of "Minderwertigkeit" is suggested as a possible explanation of Watt's preoccupation with steam power. Burgess (7) gives a broad and scholarly treatment of the part played by "socialization" in the intellectual advancement of mankind. While he has dealt with the problem in an exceptionally able manner, it will doubtless seem to many psychologists that he underestimates the factor of racial and individual differences in endowment. Professor Kroeber (42) shows the influence of timeliness and general social milieu as factors in invention and discovery. Darwin's work, *e.g.*, would soon have been done even if Darwin had never lived. The article may be taken as a social explanation of genius. Todd (84) also argues that the

typical "great man" is more a product than a cause of social evolution. The argument is ably presented, but probably few psychologists will agree with him when he says that "genius is scattered somewhat uniformly throughout the whole mass of the population," or when he follows Ward "in rejecting the familiar spindle-shaped graph of distribution of ability" in favor of a distribution which is rectangular. Gillette (**26**) gives a resumé of the writings of Galton, Ward, Odin, and Cattell, and from their data concludes that talent and genius depend on educational and conventional agencies of the cultural kind for their development. Nutting (**52**) discusses endowment, education, incentives, and fortuitous circumstances as factors in achievement.

Psychoanalytical Studies of Genius.—According to Mordell (**48**), the literary genius is one who has experienced a repression, drawn certain conclusions from it, and expressed what society does not wish to admit. Literature is largely created by unfulfilled wishes. "If there were no repression there would be no literature." By making an outlet for their repressions in imaginative literature Rousseau, Goethe and many others have saved themselves from insanity. Psychologists will at least agree with the author when he argues for the necessity of interpreting literature in the light of biography. Kempf (**38**) presents "a psychoanalytical study of Darwin's inferiority and compensations." Darwin's long period of ill health offers a fruitful field for the psychoanalyst, of which Miss Kempf makes the most. Darwin's whole life work is explained on the basis of his mother's influence, made possible by his wife's "reduplication of the mother image," while behind his ill health is assumed a suppressed affective conflict toward his father. Darwin's expressed admiration for his father is explained as overcompensation for a real aversion. Freud (**21**) makes a psychoanalytical study of the many-sided da Vinci, whom he regards as a case of homosexuality due to the circumstances of his illegitimate birth, the absence of his father, and the resulting infantile attachment to his mother. Evidence: one or two curious dream fantasies, the fact that he never married, and that he buried his mother with a sumptuous funeral! The artist's breadth of interests was due to the sublimation of an infantile sex curiosity into a general investigation impulse. Karpas (**37**) attempts to show that Socrates' philosophy is in accord with the principles of psychoanalysis, his "know thyself" being taken in the psychoanalytic sense of uncovering repressions. The personality of Socrates is analyzed in

detail, with emphasis upon the influences of the Œdipus complex and homosexual tendencies. His asceticism is interpreted as masochism, and his unhappy married life is connected in the usual fashion with his veneration for his mother. Dooley (18) summarizes various psychoanalytic studies of men of genius, including Jensen, da Vinci, Andrea del Sarto, Hamlet, Dante, Lenau, von Kleist, Gogol, Wagner, Napoleon, Amenhotep IV (!), von Zinzendorf, Loyola, Schopenhauer, and others. Their works and lives are dissected in the usual psychoanalytic style in the attempt to explain genius in terms of sex complexes and repressions. What a pity the testimony of the victims can not be appealed to!

The Psychology of Special Talent.—Miss Rogers' (64) study of mathematical ability is one of the most important to date in the field of special talent. Thirteen carefully selected "mathematical" tests and four "verbal" tests were given to 114 first year high school girls. Statistical treatment of the data yielded a battery of six tests, requiring an hour and a half to administer, which correlates from .60 to .80 with class marks in mathematics. A high correlation was found between the "mathematical" tests and the "language" tests (.65 when corrected). The correlation between Algebra and Geometry was only .30 when the language element was eliminated. Seashore's investigations of musical talent are epoch-making. In collaboration with Mount (71), he presents fundamental data on pitch, intensity, discrimination, consonance, time sense, motor ability, rhythm, and imagery in their relation to musical ability. In a volume written for the general reader (70), Seashore brings together the chief results of his twenty years or more of research on musical talent. The psychophysical traits underlying musical talent can be measured even in the lower school grades, and are little subject to improvement by training. Seashore has later described a survey of musical talent in the fifth and eighth grade classes of Des Moines (68). The study is extremely interesting, but it is unfortunate that the author fails to state clearly his method of combining and weighting the measures of the various traits. In a general discussion of musical prodigies Révész (61) asserts that these are characterized rather by their originality in musical interpretation than by exceptional skill in execution. No data are given. The same author reports a special study of a musical prodigy (62). Manual (45) used 45 mental and motor tests with 19 subjects of more than ordinary ability in drawing. The subjects ranged from elementary to university grade. The

conclusion reached is that there is no one type of psychophysical constitution underlying ability in drawing. Twelve abilities are listed which are considered important, but suitable tests for these are not offered. On the whole the study is disappointing. A more sagacious selection of subjects and tests would have yielded data more amenable to statistical treatment and of far greater value. Tildesley (**83**) discusses the dependence of artistic ability upon steadiness and rapidity of the hand. His data admittedly are inconclusive, but Gruenberg (**30**) sees great possibilities for educational guidance in this line of experimentation. In this connection the investigation of H. J. and W. A. Pannenberg (**53**) also deserve mention. Giese (**25**) has made an analytical study of more than 1,000 prose compositions and poems written by children under eighteen years. He finds the poetry of children characteristic in form as well as in content. Data are given on metre, themes, mood, etc. Striking differences are found between spontaneous poetry and that written as a school exercise. The author concludes that irony, satire, and criticism are masculine traits, while girls are more emotional, romantic, and imaginative. Boys originate, girls imitate. Boys' writings show more *Ernste*, those of girls' more *Heiterkeit*. Scholz (**66**) gives an a priori and theoretical analysis of the psychological processes involved in literary composition. Gowin (**28**) has written an interesting volume on a psychologically neglected type of genius,—the business executive. His data seem to show that executives greatly excel most other groups of men in height and weight, but as the questionnaire was used we can not be sure of the height and weight of those who failed to respond. The author's style is fluent and often brilliant. Chassell (**11**) gave to one hundred university students and to one inventor a series of twelve mental tests designed to test originality. These included, among others, word building, language completion, picture writing, chain puzzles, and mechanical invention. That the tests were not wholly successful is indicated by the fact that the inventor who was tested did not do especially well in them. Taussig (**79**) emphasizes the part played by the "instinct of contrivance" in invention, although he admits that the motives of inventors are often extremely complicated. Great money-makers have been largely motivated by the collecting instinct, domination, love of adventure, emulation, imitation, display, and sex striving.

Gifted Children.—Terman devotes 102 pages of his latest book (**80**) to a summary of findings regarding 59 gifted children

and to clinical descriptions of 42 cases. Most of these tested between 140 and 185 I.Q. Extensive social and educational data are summarized, including ratings by parents and teachers on mental and physical traits. These children in general came from superior stocks. They averaged well in health and social adaptability. On the basis of chronological age there was an average acceleration of two grades. On all the twenty traits teachers rated the children higher than did the parents. Re-tests usually agree with the original findings. Similar but more limited data had been presented by the same author in an earlier article (**82**). In another article (**81**) Terman analyzes certain documentary evidence presented in Karl Pearson's biography of Galton, from which he concludes that the boy Galton possessed an I.Q. which could not have been much less than 200. The conclusion is of special interest in view of Galton's place in the history of mental measurement. Garrison, Burke, and Hollingworth (**23**) nearly four years ago reported the case of a boy aged 8 years, 4 months whose I.Q. was 187. Exceptionally full data were given.† (As this review goes to press Mrs. Hollingworth reports that the boy is now entering Columbia University at the age of twelve years with considerable advanced standing, having passed the entrance intelligence examination with high score.) Miss Coy's account of a ten-year-old girl with I.Q. 167 is typical (**14**). The child possessed the intellectual ability of the average second year high school pupil, but was only in the fifth grade. There were no indications of abnormality. Rusk (**65**) describes the Binet performances of a child tested at the age of five years and again two and a half years later. In each case the I.Q. was close to 200. Miss Langenbeck (**43**) gives an interesting account of a five-year old child with I.Q. of approximately 200. The vocabulary of this child included approximately 6,000 words. Busch (**8**) gives an incomplete description of a rather bright child of 39 months. A four-year-old who could read well in the second reader is described by Reed (**60**). The father of Martha S. has described (**2**) in detail the methods by which he taught her to read while a mere baby. Instruction began at 19 months, and at 26 months Martha read as well as the average child at the end of the first grade. (Those who saw this article will be interested to know that recently, at the age of four years, Martha was tested and found to have an I.Q. of 140.) Jones (**35**) emphasizes the need of basing the study of gifted children on experimental procedure, and outlines the kinds of data which ought to

be included. Later in a series of articles (36) he presents the results of numerous mental and physical tests of 5 very bright and 5 borderline or defective children of about the same mental age. The superiority of the bright group is plainly shown in tests of the higher mental processes. In the sensory, perceptive, and motor functions they are no better than, and are often inferior to, the defectives. Professor Wiener has performed a real service in translating the old book in which Pastor Witte recounts the mental development of his gifted son (93). A certain amount of documentary evidence is included. Young Karl entered college at nine, took his Ph.D. with distinction before fourteen, and at sixteen was appointed on the teaching staff at the University of Berlin. He spent his life as a professor of law, became the leading Dante scholar of his century, and lived to his eighty-third year. According to Cantley (9) mental precocity is an hereditary trait and more often occurs in the first or last child of parents having widely dissimilar ages. We should distinguish true from artificial precocity. The article contains no data. Hollander (34) reiterates the ancient superstitions to the effect that precocious children are nervous, morbid, undersized, and likely to "become stupid, dull and clumsy." In view of their terrible handicaps how fitting that they should also be supposed to die young! According to Groszmann (29) bright children belong to four types, two of which are atypical and two pseudo-atypical. Atypical children are defined as representing variations from type, the pseudo-atypical as representing deviations merely from the normal (whatever this distinction means). The author's treatment is of no interest except as illustrating a defunct "type psychology."

The widespread interest evident particularly in the United States and Germany in regard to the education of gifted children is indicated by the following references, which can not here be reviewed for lack of space: (88, 33, 74, 73, 94, 72, 32, 56, 27, 49, 69, 92, 44, 75). Whipple (88) and Henry (33) are based chiefly on the Urbana experiment conducted by Whipple. The latter contains 157 references. These studies taken together show that children of 125 I.Q. or higher are able to progress at far more than the usual rate through the grades (often as rapidly as two or three grades in one year), that they need far less drill and explanation than average children, that in general they show few signs of abnormality in health and character traits, and that their needs cannot be met without extensive modifications of the curriculum.

As was to be expected, the publication of Daisy Ashford's precocious novelette (3) brought to light a host of juvenile authors. Easily the most interesting of these is Opal Whitely (89), though it is improbable that any psychologist of childhood will accept the assurance of the Atlantic editor that the journal was written at the time its author claims. Many of the free verse poems of Hilda Conkling (13) have real merit. Miss Stoner (76) has been before the public since childhood. The story of Horace Wade (86) is drivel, notwithstanding the laudatory introduction by George Ade.

Miscellaneous.—Contributors which the reviewers have not seen include: (6, 41, 57, 64, 85, and 90). Most of these are probably of little value for the psychology of genius.

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PROSTITUTION

BY FLORENCE MATEER

Bureau of Juvenile Research, Columbus, Ohio

The last decade has seen a most radical change in all that relates to this ancient social problem from sociological, legislative, medical, and even ethical viewpoints. The development has not been an independent one but so closely interrelated to progress in laboratory technique in medicine, the utilization of trained social workers, the development of psychological methods, changes in the economic and political status of women, and the impetus felt in all of these fields because of the war, that any discussion of the subject per se necessitates a definite understanding of progress in these lines.

The first half of the decade may be justly characterized as a period of surveys and systematic investigations. Over thirty cities in the United States made attempts to ascertain something which would serve as a basis for a constructive policy. These reports varied in length, accuracy, detail from the four page non-effective statement issued by the New York Bureau of Municipal Research concerning Columbus, Ohio (7), to the elaborate statistical reports compiled by Kneeland whose work deserves high credit for perspective given. The study of Chicago (6) conditions reported prostitution as a social evil dependent upon many factors. Local conditions, police morale, ease of supply, prevalence of crime, activity of educational and protective agencies, stringency of prosecution, medical inspection and attitude, and legislation all shared in the responsibility. Segregated districts and police registration similar to European custom were declared insufficient and "constant and persistent repression of prostitution the immediate method," with "absolute annihilation the ultimate ideal" was the final summary of the report.

In 1911, as a result of the work of the Special Grand Jury which investigated the white slave traffic in New York City, the Bureau of Social Hygiene was established to systematize and render continuous effort against the problem of prostitution. To this agency we owe a series of volumes which have been fundamental in stimulating thought and action on this matter. Their first report (11),

compiled by Kneeland, is a step in advance of any civic reports preceding it. It brings out with new emphasis the part played by the double standard for men and women, involving penalty always for the woman, escape as frequently for the man. Exploitation is treated clearly and definitely and shows definitely the relation of social evil to enforcement of law. A later edition of the same report shows the demolition of the system under law enforcement. Careful analyses are submitted of prostitutes under imprisonment but unfortunately the tabular presentation shows each factor individually and little attempt is made to study correlation or multiple determination.

The Massachusetts report, made under the direction of Fernald (13), issued in 1914 differs from those preceding it in its utilization of modern methods for determining the status of the prostitute herself. A study was made of 100 unselected cases in prison, another hundred awaiting trial and another hundred in the Industrial Schools. The study involved examination by the Binet, a school examination, practical information and an attempt to obtain the family, personal, social and economic history of each girl studied. 154 of the 300 women examined showed mental defect "so pronounced and evident as to warrant legal commitment of each one as a feeble-minded person or as a defective delinquent" (p. 29). It is to be regretted that a medical examination of similar thoroughness, including laboratory tests for venereal diseases was not made in all cases. There is a high probability that much of the low mentality found may be a by-product of syphilis and thus at least a concomitant of prostitution rather than a factor in its causation.

Miner (16) in the *Slavery of Prostitution* gives the best illustration of what can be done by individual study of the prostitute. Unfortunately her case studies do not give the scientific data on the individual which could have been gathered even at the date when the study appeared. Psychological, psychiatric, neurological and physiological study would undoubtedly have de-limited her various problems in a fashion which would have enabled others to profit more by the writer's experience and success. The study embodies primarily woman's tolerance, understanding of and struggle for the victim of prostitution, woman. The study is a forerunner of the protective work done throughout the country during the war.

The European situation in its historical perspective, covering

conditions up to 1914, has been presented in rather inconvenient statistical fashion by Burgess (3). Probably the greatest value of the book is its chapter on a constructive policy by Olson. The writer is too little scientific and cannot keep even his discussion of the religious aspects of the problem free from his own conviction.

Calhoun (4) gives one a chance to relate the historical development of prostitution in America in its relation to changing social conditions. Although the subject is but incidental to his analysis of family life it provides a well-oriented point of departure for more specialized investigation. The study loses somewhat from the writer's unjustified assumption that the new status of women will eliminate prostitution.

The condition in Europe at the outbreak of the war is most ably and independently stated by Flexner (9). Prostitution, under his pen, becomes an end result of supply and demand, wealth, occupation, law, race, education, the double standard, "unschooled human nature and imperfect social institutions." His application of European experience to American problems involves correlative study of other social problems and the reconstruction of the prostitute.

The religious attitude of this data is presented independently by Begbie (2). He demonstrates the fallacy of the assumption that any one lack or fault may completely account for a social phenomenon as complex as prostitution. A proper ideal of purity is his compensation. "Virtue knows nothing of geography, is indifferent to climate, and triumphs over heredity and environment," p. 97, is his emphatic assertion. But little of this viewpoint remains today, such practical discussions of morals as that by McKeever (15) seeming to replace it.

The government assumption of responsibility for the health of the army and navy upon our entrance into the world war materially changed the angle from which prostitution was viewed. Prostitution became merely a means of decreasing man power because it presented constantly and in constantly aggravated fashion the possibility of infection by gonorrhea and syphilis. The prostitute was merely the conveyer or carrier of this danger. It is impossible for one to believe that anything short of years of propaganda would have brought any such change in attitude in a time of peace.

Blue (25) outlined a policy for the control of venereal diseases which covered control through legislation and strict enforcement,

quarantine, treatment, and education of the public. His circular letter to the states refers directly to venereal disease, discussing prostitution incidentally. Lane (12) presents the opposite side of the question in outlining the work of the Committee on Protective Work for Girls. The aim of this committee is not primarily one of making arrests but of preventing crime through education of the girl, the provision of proper living and recreational conditions and the enforcement of legislation.

Every one knows of the preventive work done in similar fashion among the soldiers themselves. A brief but clear news report of this, at the time, is made by Seymour (22). The war shows us the state laxity in the detection and treatment of this problem. Every avenue leads back to the necessary elimination of the prostitute if venereal disease is to be controlled. The same writer (21) gives us a summary of conditions abroad. Prostitution is a menace because of venereal disease so spread. The civilian must share responsibility with the soldier. Scientific research into cure must go hand in hand with self-control for the sake of the individual, the family and the race. The tradition of sex necessity must go. Education, proper recreation and the relief of debasing monotony because of economic stress must all bear their part in prevention.

As a result of these changes in method of attack the literature of 1918, 1919 and 1920 bears superficially little relation to the subject of Prostitution. Instead the tendency is to drop a discussion of prostitution per se for it is merely the anti-social end product which may be much better understood and dealt with from the standpoint of various factors causing it. Several of these factors have become more prominent than others.

The prostitute herself has been more thoroughly studied. Practically all studies of delinquency devote a part of their analyses to the sex offender, whether merely immoral, a "charity" girl or an actual prostitute. Anderson and Leonard (1) find that venereal disease is not limited to "chastity offenders," although the percentage of disease is much higher in this group. They point out the relation to alcoholism, stealing and other offenses. Fewer of those who were diseased were self supporting no matter what the offense. No data as to mental status are presented in this study. A brief study by Purcell-Guild (19) gives a clear view of the basis in delinquency from which the prostitute is often developed. One hundred of the hundred and thirty-one girls studied were sex delinquents, thirty-five claiming to have been raped but sixteen

of this group had had other sex experiences. Thirteen per cent. of these girls, averaging only fifteen years of age, were already infected with venereal disease. Their delinquency is shown to be the result of low educational (and mental?) ability, economic stress, environment, parental example, and other concomitants.

Norton (17) finds that the median mental age of 127 prostitutes under surveillance for treatment is nine years and ten months and only 16 have a mental age of thirteen or over. Unfortunately only an abbreviated Stanford Binet was used as the basis of this study so that the findings must be suggestive rather than final. McCord (14) finds that 54 per cent. had a mentality of ten or less.

A most important movement has been the development of brief expositions of the dangers of prostitution, the fallacy of the double standard, etc., in pamphlet form for general distribution. Many state Boards of Health, some local boards and private agencies have developed such a series. The series published by the American Social Hygiene Association is undoubtedly one of the best. The various pamphlets cover sex instruction for young children, for boys and girls, help for educators, parents, physicians, and even for those diseased. "Warnings about prostitutes" is published in various tongues, as are other pamphlets.

Closely related to this work is the development of new magazines which deal chiefly with this problem and which, in conjunction with reports and bulletins, reflect most of today's movement against prostitution. A brief and simple manual by Pusey (20) will be found distinctly valuable as an aid to the social worker to whom the subject is a new one. It offers an outline for preventive and control procedures, discusses the suppression of prostitution, and also gives some instruction for the treatment of diseased individuals.

Besides the lines of more or less scientific study of the individual as a factor in prostitution and the development of educational propaganda there has been distinct advance in legislative control, medical enforcement, actual medical research, and recreational prophylaxis.

Written reports on legislation are not easily located and are usually brief and partial in presentation. Law in the making cannot develop a proper critical perspective from which to view itself. Now and then more comprehensive statements are found such as that by Deardorff (8) giving us some of the "local color" back of the continuance of the Interdepartmental Social Hygiene Board.

We await with interest the promised appearance of a government monograph giving us data on the study of 15,000 delinquent women studied by this department. Similarly brief reports, for instance, inform us of the federal aid given to Chicago (5) to reenforce legislation which has carried out the commission recommendations of 1911; and of the recent establishment in Pittsburg (18) of a new Morals Court as recommended so long ago as 1912.

It is too soon to say whether any permanence of change in ethics will grow out of our recent experiences but the stimulus for such a growth and creed is already at hand. Hall (10) in his volume on morale devotes several chapters to the discussion of sex and its sublimation. The greater part of the book is an exposition of the principles of human behavior which justify all the seeming indirectness of the decade's attack on vice. Undirected energy, unfilled time, negative supervision condone and aid vice. Morale, consciously fostered, eliminates much of it.

The field of the greatest development stimulated by the new social consciousness of prostitution is that of medical research on venereal diseases. With the demand for the study of these diseases has come all of the refinements of laboratory technique for their detection and the clinical development of diagnosis. One individual cannot estimate the amount of study involved nor appreciate, as yet, the advance made. Southard's texts on Neurosyphilis (23) and Shellshock and other Neuro-psychiatric problems (24) are splendid illustrations of the work done in relating syphilis to delinquency, disease, war, economics, and social ethics.

The end is not yet, however. Most of the studies made of prostitution or of one of its causative factors are unfinished or so partial and lacking in correlation with other factors that the conclusions reached cannot help being distorted or lacking in balance. There is so far no prolonged and intensive study of young sex delinquents to see whether they furnish the mass of prostitutes. There is no study of prostitutes prolonged and intensive enough to tell what happens to them. Statistics give their disappearance from the group. The death rate does not account for the disappearance. They are not in custody. Is prostitution an incidence in their lives? There is no study prolonged enough to tell how many, affected with venereal disease, become insane. The state hospitals do not know how many of their diseased women have long since been prostitutes. No one has as yet determined the relation between low mental age in the prostitute and deterioration due to

disease of the nervous system. We need to know what per cent. of the so-called "normal" adolescents in our country practise sex experimentation. It is too soon to say how the recent change in the economic and political status of woman will affect prostitution, and illegitimacy. What may the socializing of the church and the school accomplish? What will public health organization and education on sex hygiene accomplish? All we can say is that prostitution is being attacked by modern methods. All work so far is simply rudimentary.

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VISUAL MOTOR FUNCTIONS

BY RAYMOND DODGE

Wesleyan University

The last review of visual motor functions (1916) noted and deprecated the tendency to exploit eye-movement phenomena in studies of related processes rather than to make them the object of investigation. This tendency is noted again in the last three years and again it must be deprecated.

Recent psychological interest in the eye-movements, aside from their utilization as indicators in the effects of drugs, fatigue, etc., centers in the nystagmus of rotation. This is partly because psychological suggestions for a scientific investigation of the significance of rotation tests in the medical examination of prospective aviators were violently smothered by military discipline during the war, and partly because the semi-circular canals lie directly in the line of scientific advance, and nystagmus is the chief objective indicator connected with these mysterious receptors. In all the nystagmus studies that have fallen under the eye of the reviewer, interest centers in the receptors and their central connections rather than in the indicators. This automatically excludes them from this review, though the reactive compensatory eye-movements really present a considerable series of unsolved scientific problems.

The number of studies of the eye-movements that is presented in the Index is small.

Kuntz and Ohm (2) took flash-light photographs of normal and abnormal eyes when the line of regard was horizontal, raised 30° and lowered 30°. Pupil size was only slightly affected. Interpupilary distance was regularly smallest when the line of regard was below the horizontal. It increased as the line of regard was raised to the horizontal, and was sometimes further increased and sometimes decreased by further elevation.

Comparison of photographs which were taken when the conditions for binocular fusion were adequate and when one eye was covered until the moment of record, indicated irregular changes in muscular imbalance according to position of the line of regard. Head-holder, photographic and measuring techniques were excellent

but without essential novelty. The technique as a whole, however, is an independent and interesting solution of the problem of photographic registration for pupilary size and distance for various positions of the eyes. The problem of muscular imbalance of the eyes for various directions of regard deserves further investigation.

Ohm (3) presents a statistical clinical investigation of several factors in the endowment that predispose to miners' nystagmus. It is a contribution to diseases of occupation. The development of nystagmus is favored by alcoholism, strabismus, defective vision, bodily size, and some other undetermined factor.

Bikeles and Ruttin (1) found reactive compensatory eye-movements in a meningitis patient with non-functioning labyrinths. From rough experimental data they conclude that the stimulus was of joint and muscle origin, and that the compensatory eye-movements were reflex.

On the basis of clinical evidence which he extensively reviews, Walter (5, 6) demonstrates a differential localization of eye-movement disturbances in three main centers.

Using the method of direct microscopic observation of the sclerotic (Blix ophthalmometer) Sundberg (4) studied the course and accuracy of fixation movements. Faulty fixations and corrective movements, that photographic registration has made us familiar with in this country, are independently observed and described. Among the most interesting new observations Sundberg reports that the meridian of movement makes little difference in their precision; but when the path of the line of regard is tangential to circles which are concentric with the primary fixation field, the precision of fixation movements is notably diminished. Increasing the extent of eye-movement from 7° to 50° increased the fixation errors irregularly, less than 100 per cent. Excluding a peripheral view of the point to be fixated increased the errors almost 300 per cent. The discrepancy between the accuracy of eye-movement and space differentiation on the peripheral retina is noted and discussed with reference to the theory of visual space. Wandering of the line of regard (the size of the fixation field, as we call it), was estimated with accuracy. But the various factors in these fixation changes, namely the pulse, divergence drifts and fixation lapses were not identified.

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LOCOMOTOR FUNCTIONS

BY IVY G. CAMPBELL

Wells College

The last few years have given us considerable opportunity for studying the mechanisms that subserve locomotor functions. In the first place the various treatments of nerve lesions have allowed us to study recovery of functions. In the second place the frequency of cases of so-called "functional paralysis" has made possible new observations and new theories to account for these observations.

A number of methods for remedying paralysis of muscles due to division of nerve have been used. Nerve suturing is common. Nerve anastomosis is reported by some to be very successful, (**2, 11, 37, 38**), while others condemn it (**28**). Nerve grafts or transplants are in many cases reported as successful. (**9, 11, 12, 16, 17, 24, 31, 34, 36, 40, 44**). Huber (**17**) relates experiments with animals in which good results were obtained with "auto-nerve" transplants and for bridging long gaps he especially recommends "cable auto-nerve" transplants, *i. e.*, several segments of a small cutaneous nerve are used to bridge a gap in a larger motor-sensory nerve. The type of nerve used is not material nor is the direction in which it is inserted, but accurate end to end adjustment is essential. Fresh "homo-nerve" transplants may also be used as may also nerves that have been stored in sterile fluids. "Hetero-nerve" transplants stored in liquid petrolatum were never successful although those stored in fifty per cent. alcohol showed some down growth of central neuraxes. Ingebrightsen (**24**) experimented with rabbits and guinea pigs and found that auto and homo transplants but not hetero were successful. The bridging of nerve defects by means of nerve flaps is defended by Mackenzie (**32**) and as strongly condemned by Stookey (**45**). From a reading of case histories presented in the literature one is persuaded that the above mentioned operations are successful but on the other hand Sir Robert Jones (**28**) states that the Medical Research Committee whose report is not yet published, after carefully investigating a large number of cases operated upon has come to the conclusion that nerve suturing is the only successful operation while anastomosis, transplants, flaps, etc., are failures.

Direct neurotization of paralyzed muscles in the sense of Heinake and Erlacher is reported by Steindler (41) and by Elsberg (10). Both men found that if the nerve normally supplying a muscle were cut and then re-implanted into the same muscle and at the same time a foreign nerve was implanted into this muscle that the former but not the latter would come to subserve the functions of that muscle. Frazier (11) speaks of the implanting of surplus nerve fibers from the spastic muscle into the weakened antagonistic muscle; thus making the attempt to strengthen the antagonistic muscle by supplying it with an excess of impulse from a center which is over irritable. The transplantation of tendons, successfully accomplished in cases of paralysis, is discussed by (11, 12, 26, 28). F. W. Jones sees in this a "beautiful physiological experiment" which raises the question whether the transplanted muscle will assume a new role altogether antagonistic to that which was its natural one.

As to the time of return of motor function there are varying reports. After suture it is reported to return in a few days (15, in the case of dogs in sixteen days (13), in two months (16). Most writers, *e.g.*, (31, 36, 43), find it after five or more months. In the case of direct implantation it is reported in from six to eight weeks (10, 41). In the case of nerve transplants Ingebrightsen(24) reports it in one hundred days.

So much for the facts in regard to return of function. Is this return due to (*a*) recovery of the injured nerve, (*b*) the taking on by neighboring nerves of the functions of the injured one, (*c*) the performance of the function by "compensatory" muscles. Most writers seems to assume that (*a*) is the cause. On the other hand there are those who think that neighboring nerves can assume the functions of injured ones (3, 17, 36). Jones (26–27), however, contends that appeal to vicarious functioning of nerves is unnecessary, that if we examine carefully we will find that it is not another nerve taking on function but rather it is other muscles performing the functions generally performed by the paralyzed ones. Muscles act as antagonists, as synergics, as fixation muscles, as well as in the role of prime movers. It is the interrelation of muscles in these four capacities that give us any specific movement and when one of these capacities is destroyed another one may function indirectly to accomplish a movement. For example the flexion of a paralyzed joint may be accomplished by the contraction of the extensors of a neighboring joint. Many instances of substitute

movements are given. Ingram and Arnett (25) also give a large rôle to compensatory movements and point out that in attributing return of function to recovery of nerve we must be sure just what muscles are effecting the movement. Woods (46) says that an attempt to contract a paralyzed muscle often results in an involuntary contraction of its antagonist which in turn is followed by a rebound due to the resiliency of the soft tissues. Marie and Foix (33) also speak of movements which help toward the automatic execution of habitual movements which would not otherwise be possible. For example the involuntary symmetrical movements occurring on one side when the other side is voluntarily moved. Bethe (1) tells of two soldiers who had their arms amputated about the middle of the arm and whose flexors and extensors were furnished with hooks. Against the patient's will contraction of one set was accompanied by relaxation of the other. By practice this was to some extent overcome by strong efforts of the will. Clarke (7) suggests that in some cases of voluntary disorders the reciprocal innervation through the final common path may be disturbed so that the antagonists are strongly innervated together, the result being not the desired movement but a spasm of the limb in the position of the strongest set of muscles. Hunt (18–19) contends that from studying return of motor function after injury we gain evidence that there are two distinct physiological systems for the transmission of motor impulses in the peripheral nerves. Two types of movement are seen in this restoration: the automatic and associated movements which are phylogenetically older, are under the control of the corpus striatum, are a more diffuse sort of movement; and the isolated, synergic movements which are more specialized, are younger, are under cortical control. In recovery of nerve injuries the older type of movement returns before the younger. This is comparable to the return of protopathic before epicritic sensitivity. The non-medullated fibers are suggested as those which subserve this older type of movement. Evidence from a number of quarters is given to uphold his view.

A number of writers state that artificial stimulation of muscles will hasten recovery of motor function. This seems doubtful in the light of the following experiments. Hartman and Blatz (14) working with rabbits found that neither massage nor galvanic stimulation benefited denervated muscles. Both methods cause increased activity in muscles which are already overstimulated by constant fibrillation. Stevens (42) contends that the cause of

muscular atrophy following nerve section is due to the fatigue which is caused by fibrillar contractions. Over-action of muscle leads to shrinkage of its volume. Langley (29) too found results comparable to those of Hartman and Blatz. He says that "disuse atrophy" is a misnomer.

Observations of "functional" paralysis have resulted in a number of interesting contentions. A great many think of these as hysterical manisfestations curable by suggestion. Remarkable "cures" are reported. Hurst (20–23), has written at great length regarding these and has offered an explanation of the facts observed. Very often in cases of functional disorders we are dealing with cases which were originally organic. When the organic basis is removed the symptoms continue. A man who has attempted, unsuccessfully, to make movements gives up after a time and ceases to pay attention to the muscles involved. But attention is necessary in order that one walk, see, feel, hear." For feeling, seeing, hearing are active processes, and require an effort of the will just as much as walking. The latter may become automatic in time, but if the individual accepts the suggestion that he cannot walk he no longer makes the active effort which is required." Anæsthesia following stupor due to shock Hurst would explain as due to withdrawal of attention. As the physiological basis of this lack of attention he suggests increased resistance in the synapses of the sensory tract. If you can arouse the patient's attention to the processes involved you can make him walk, see, hear, etc. In a a series of one hundred consecutive case of paralysis and contractures, ninety six were cured at one sitting, one in four days, two in two weeks, one in four weeks, although the average duration of treatment before they were admitted to Hurst's hospital was eleven months. Hurst has found that in tabes dorsalis and in Friederichs ataxia an hysterical element is often present which he has succeeded in dismissing much to the patient's benefit. One is duly impressed when reading Hurst's case histories and is convinced that attention and effort seem necessary for movement. But may it not be that it is in just these kind of cases that one must watch for movement through "compensatory" muscles? Attention and effort are necessary to make these movements as well as others. If one can get the patient to make an effort he may accomplish movement not through the structure originally injured but through one which may compensate for the lost one. If this is true it hardly seems fair to call the patient hysterical. The loss of reflex action, found

in some of these cases, is not explained in this way, but it may be that these are the truly hysterical cases while the functionally paralyzed who are so marvelously "cured" are not hysterical.

Brown (4) found that if he could make his patient re-live the emotional experience which had precipitated the symptoms that these would leave. He suggests that the emotion may act physically in overcoming synaptic resistance. Brown and Stewart (5) attempt to explain functional paralysis as due to loss of sensory processes. These writers postulate that when the motor mechanism of the cerebral cortex is cut off from the centripetal ("sensory") nerve impulses of the part of the body the movements of which it subserves, it becomes inactive. It is however still a workable mechanism and may be incited through anything that will increase the intensity of the sensory impulses. Suggestion may do this. The "functional gait" of some cases of functional paralysis is explained as a dropping back to an earlier form of movement—the postural. Postural activity is controlled by the red-nuclear mechanism: the newer phasic movement by the cortex. Now "when the cortical mechanism in functional paralysis is with difficulty activated by the centripetal impulses which we may loosely say subserve the 'desire to walk,' the red-nuclear system lies open and progression of the still 'postural' type is conditioned." In the light of Lashley's experiment (30) upon the man who was anaesthetic to passive and active movements of the knee and who even so could carry out accurate movements, one doubts that Brown and Stewart have adequately explained the facts. Of course Lashley's patient was one with spinal injury while the others are speaking of functional paralysis.

Roussy (39) from a study of over two thousand cases of psychoneuroses gives a large predetermining role to the mental factor. These patients seem to do all in their power to lose the use of the limb. "The patients are persons with a special turn of mind, whose will is deficient or more or less perverted."

Directly opposed to those who are contending that functional paralysis is primarily dependent upon some faulty mental process-attention, will, or what not—are those who would give it a physical basis. We will cite Bury and Dana. Bury (6) calls attention to the fact that many of those who have been "cured" relapse. After working with many cases of men who seem—despite the best will in the world—unable to properly innervate their muscles, he writes: "It is difficult to avoid the conclusion that there are

some physical or chemical changes affecting his motor neurones and interfering in the normal relation between impulse and inhibition, changes which in all probability were set up by the effects of the emotional shock caused by the shell explosion. The observed faulty innervation gives one the impression that there is a block at some synapsis which prevents the proper transmission of cortical impulses to the lower motor neurones." Molecular disturbances of the nervous system and altered blood states largely account for the long duration of many cases and the great tendency of these cases to relapse. Dana (8) also emphasizes the physical. Endocrine defects are often involved. These may have an effect upon the synapses. Symptoms such as hemiplegia, stuttering, tremor, etc., following emotion are not due to some subconscious defense mechanism but to organic or biochemical disturbances in the nervous system. If this is true how can a single mental effort overcome an organic cause? ". . . the organic is in more than a majority of cases biochemical . . . brought on by a shifting of neural changes through attention or concentration on a certain object. . . . In emotional states the total neural or cerebral energies are massed in certain minor and major association groups connected with the particular form of apprehension or terror. By effort of volition or by a counter emotion, the equilibrium is restored. But some patients do not get well by any of these easy methods."

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References no. 1, 2, 9, 13, 16, 24, and 35 were not available and were reported from published abstracts.

DISCUSSION

THE EQUIVOCAL POSITION OF THE *PRESENTATION* IN THE PSYCHOLOGY OF JAMES WARD

BY MARY WHITON CALKINS

Wellesley College

James Ward's recently published *Psychological Principles*[1] need not be commended to the many students of psychology who, like the present writer, have for years profited by Ward's penetrating analyses and illuminating conceptions. It is a satisfaction to possess this enforcement, revision, and supplementation of Ward's doctrines concerning extensity and space-consciousness, the experience of time and of change, and the virtual identity of consciousness with attention to name no other of the outstanding teachings of this highly important book.

In this brief paper I am, however, attempting no review of the *Psychological Principles* as a whole, but am challenging one of its basal conceptions. To make clear my point of divergence it is essential briefly to outline Ward's psychological position. He conceives psychology as dealing with individual experience.[2] And central in experience, he everywhere teaches, is the subject (or self). This doctrine, reiterated in all his writings, gains fresh emphasis in the *Psychological Principles*. The activity of a self, of a "being who feels and acts" is, he says, "past question."[3] The alternative conceptions of self-consciousness—that of a series of psychic phenomena aware of itself and that of one psychic phenomenon as known by another—Ward finds "unthinkable." It is not "my consciousness," he insists, which "remembers": *I* remember.[4] And he rightly asserts that "the concept of a self . . . is to be found implicitly or explicitly in all psychological writers whatever—not more in Berkeley who accepts it as a fact,

[1] James Ward, *Psychological Principles*. Cambridge University Press, 1918. Pp. xiv + 478.

[2] Ward adds significantly: that psychology is not for this reason "confined exclusively to the introspective method." (*Op. cit.*, p. 27[2].)

[3] *Op. cit.*, p. 381[2]

[4] *Op. cit.*, p. 22. *Cf.* p. 38[2].

than in Hume who treats it as a fiction."[5] The fact that so many psychologists ignore the self or else refuse it admission into scientific psychology he wisely attributes to the common confusion of "the psychological concept of a self or subject . . . with the metaphysical concept of a soul."[6]

And yet Ward's psychology is not in the fullest sense of the phrase, the science of self or subject. It is, rather, the study of experience; and he conceives of experience as including both (1) modes and attributes of a subject and (2) presentations to a subject.[7] Concretely experience as he analyzes it includes: (I) The subject's "non-voluntarily attending to changes in the sensory continuum;" (II) The subject's "being pleased" and displeased (an ultimate factor of experience to which no special presentations correspond); (III) the subject's "voluntary attention . . . producing changes in the motor continuum."[8]

This programme as a whole merits interested study—in particular the enumeration of the basal forms of psychic life as predominantly receptive, predominantly affective, and predominantly active consciousness. But this paper is simply concerned, as its title suggests, with the part which the "presentation" plays in the psychological system of Professor Ward. Presentations, in his use of the term, are (1) identified with Locke's "ideas" and Kant's *Vorstellungen*; are (2) said to include "sensations, movements percepts, images, intuitions, concepts;"[9] are (3) regarded as constituting series;[10] and are, finally, (4) described as "psychical objects," largely independent of the subject of consciousness and with "properties and laws of their own."[11] These last words indicate the fundamental incongruity of this doctrine about the presentations with the rest of Ward's system. A psychology for which the self is "always in question" whether one seeks "to analyze one's own consciousness or to infer that of a lobster,[12] ought, it

[5] *Op. cit.*, p. 35^2.

[6] *Op. cit.*, p. 35^2.

[7] On page 39^2 of the *Principles*, "experience" is used as synonym for "mind" and for "the individual mind" and is said to "mean . . the subject" of a series of "feelings" or phenomena "*plus* the series of 'feelings' or phenomena, . . . *i.e.*, *objects*." Ordinarily, however, "experience" is distinguished from "the experiencing subject."

[8] *Op. cit.*, p. 56.

[9] *Op. cit.*, p. 46^1. On p. 50^2 Ward used for 'movements' the more accurate term, 'motor presentation.'

[10] *Ibid.*, p. 39^2.

[11] *Ibid.*, p. 56.

[12] *Op. cit.*, p. 35^1.

would seem, to regard perceptions, images and the other presentations solely as possessions or characters of the subject or subjects. To attribute to the presentations "properties and laws of their own" is to come perilously near a regression to that form of traditional psychology which studies (in more or less close affiliation to the associationism repudiated by Ward) the series of related "mental states," "contents," or "processes," ignoring completely the subject of the states and processes.[13] The truth is that there is no room, on Ward's principles, for this anomalous *tertium quid*, the presentation, this something which is neither subject norconcrete object. Impersonalistic psychological systems must of course be weighted with "contents or "states" or "psychic objects, abstractions one and all. But Ward need never have encountered the difficulties involved. He might have treated psychology throughout, after the fashion in which he once defines it, as the study of the subject "intercourse with his special environment,"[14] and he might and should have meant by environment the complex of objects of the "common-sense" world—terms and relations, people and things—objects which the philosopher must probe further but which the psychologist may well accept at their face value. The psychology of Ward, thus relieved of the presentations, would still be a study of "individual experience," but the specific object of study would be the experiencing subject in its different relations or attitudes to the environment. A psychology, thus conceived, would not only find place for all the positive teachings of the presentation doctrine but would enrich and supplement these by fruitful observations from the subjective, or personalistic, point of vantage. Thus, in place of sensations, or "primary presentations," there would be the receptive, sensing self involuntarily affected;[15] in place of the "train of ideations," the continuously imagining or thinking self; in place of 'conations,' the willing self. As a matter of fact, Ward often treats non-sensational consciousness in terms not of the successive presentations but of the conscious subject. Thus, he defines thinking as "analysis and resynthesis;"[16] he asserts that "we assume an attitude and so become conative;"

[13] The difference on which Ward insists between (1) the presentation as *psychical* object "presented to the subject" and (2) the *physical* object "conceived as independent of any particular object" at least suggests that he feels this difficulty of conceiving presentations as independent of the subject. *Cf.* pp. 46^2 ff.

[14] *Ibid.*, p. 17^2. *Cf.* pp. 30^2, 381^2.

[15] *Cf.* Ward's virtual use of this conception, p. 104^2.

[16] *Op. cit.*, p. 305^2.

and his fine analysis of expectation, also, is in terms of "active attitude."[17] Finally, he expressly describes feeling as "not itself a presentation but a purely subjective state . . . a unique and ultimate factor of experience." By these words, Ward means, of course, to distinguish feeling from perception and will;[18] the contention of this paper is that he should have regarded all forms of consciousness, and not feeling alone, as "purely subjective."

It remains briefly to indicate the apparent reason of Ward's neglect of this conception of psychology as science of the experiencing subject and his consequent presistent entanglement of himself with the presentation doctrine which is really so foreign to his system. The reason is this: Ward denies the coextension of self-consciousness with consciousness. Not "every self," he teaches, "only some experients" are aware of themselves and that, gradually.[19] The subject of experience, round whom his whole system revolves, he describes as self-knower only, not self-known. And, to cap the climax, he once at least reduces the self-as-known to the level of the presentation, describing it as a temporal self, a presented self, "one presentation among others."[20] This conclusion, mainly unargued, is strongly at variance with the whole trend of Ward's doctrine. For surely the self must be, in a fundamental sense of the word, known in order to be both described and treated as center of experience. Ward avoids the dilemma by the implication that the subject self is *experienced*, not known.[21] But this seems a quibble in words. A subject which is experienced *is* known in any save a narrow and artificial use of the word. And a self which is experienced is, consistently with Ward's own basal conceptions, the real topic of psychological study.

[17] *Ibid.*, pp. 210 ff.

[18] It is beside my main purpose to suggest that Ward himself later seems virtually to abandon this sharp distinction of feeling from perception and will and to recognize feelings which are virtually on a par with presentations. *Cf.* pp. 245[2] and 266.

[19] *Op. cit.*, 361[1].

[20] *Op. cit.*, p. 363[2].

[21] *Op. cit.*, p. 378[2]. *Cf.* p. 364 where, curiously enough, Ward says of the presentation self that it "knows itself."

COMMUNICATIONS

CONSULTING PSYCHOLOGISTS

The following open letters to the members of the American Psychological Association have been received through the chairman of the Committee on Qualifications and Certification of Consulting Psychologists. Although they specifically concern the situation in clinical psychology, the matters dealt with are of interest to all psychologists. During the past few years there have been numerous instances of the exploitation of different communities by persons not proved as professional psychologists but who are unknown for their psychological experience and investigations. Psychology, and its derivatives, has become one of the most popular "catch words" of the time, and it is being widely utilized, largely for easy financial gain, to the detriment of psychology, both science and technology, and of professional psychologists.

THE EDITOR

TO THE AMERICAN PSYCHOLOGICAL ASSOCIATION:

Mental examinations, and recommendations in the management of cases, are now made in the name of clinical psychology by persons of inadequate equipment therefor, involving improper risk to the persons whom they examine, and to the social agencies responsible for them. Psychological criteria, however valuable, are not sufficient guides in the detailed treatment and final disposition of pathological cases.

It is usually impracticable to determine for the occasion the qualifications of persons attempting so to practise. The American Psychological Association is the body properly responsible for the scientific and ethical standing of this division of the problem. With the expectation that such action by the association will better coordinate the psychological factor in the interest of the patient, it is considered that this association should formulate the requirements which it regards as essential to the proper functions

of the clinical psychologist; and should upon application issue to those whom it finds thus qualified, documentary evidence thereof.

WALTER E. FERNALD, M.D.,
Superintendent of the Massachusetts School for the Feebleminded, Waverly, Mass.,
ARNOLD GESELL, Ph.D., M.D.,
Professor of Child Hygiene and Director of the Psychological Clinic, Yale University,
C. MACFIE CAMPBELL, M.D.,
Professor of Psychiatry, Harvard Medical School

TO THE AMERICAN PSYCHOLOGICAL ASSOCIATION:

Mental examination, interpretations of the results of psychological tests and recommendations based on these are sometimes made in the name of clinical psychology by persons with inadequate equipment for such an important task. This involves improper risk to individuals examined and possible mismanagement of the case by families and all sorts of social agencies. We feel that on account of this there is the greatest need for thorough training of clinical psychologists in both normal and abnormal psychology, since problems presented to them lie in both fields.

To insure even approximation to the proper standards it is necessary to have some authoritative recognition of fitness. The American Psychological Association is the body logically responsible for scientific and ethical standards in this branch of professional work. With this in view we consider that this Association should formulate the requirements which it regards as essential to the training of the clinical psychologist, and should, upon application, issue to those whom it finds thus qualified, documentary evidence thereof.

WILLIAM HEALY, M.D.,
Director of the Judge Baker Foundation, Boston, Mass.,
PEARCE BAILEY, M.D.

EDITORIAL ANNOUNCEMENT

Beginning with the January, 1921, issue the policy of the BULLETIN will change to the extent that six numbers will be devoted to abstracts, one number will contain the proceedings of societies, and the annual summaries will be replaced by reviews of special topics in five numbers. The reviews will be three, four and five year critical evaluations of the literature of the special topics. Critical reviews of books will also be published in the review section of the BULLETIN.

NOTES AND NEWS

DR. ERNEST H. LINDLEY has been elected chancellor of the University of Kansas.

ANNOUNCEMENT is made of the forthcoming consolidation, beginning January 1, 1921, of *Psychology* and the *Journal of Animal Behavior*, under the joint editorship of Professors K. Dunlap and R. M. Yerkes.

PROFESSORS R. M. YERKES and SHEPHERD IVORY FRANZ have returned from abroad where they took part in the London conference relating to the *International Catalogue of Scientific Literature*.

PROFESSOR G. F. STOUT has resigned the editorship of *Mind*, and Professor G. E. Moore, 19 Magdalen Street, Cambridge, England, has been appointed editor in his stead.

DR. WALTER DILL SCOTT, professor of psychology at Northwestern University and president of the Scott Company, has been elected president of Northwestern University.

DR. FRANCIS N. MAXFIELD, formerly psychologist of the schools of Newark, N. J., has accepted the position of director of the bureau of psychology of the Pennsylvania Department of Public Instruction at Harrisburg, Pa.

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